STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   Timber Sale Name: Golden Goat *Agreement #:30-074816*

2. Name of applicant: Washington Department of Natural Resources

3. Address and phone number of applicant and contact person:

   Olympic Region
   411 Tillicum Lane
   Forks, WA 98331

   Contact Person: Mark Benner
   Telephone: (360) 374-6131

4. Date checklist prepared: July 21, 2004

5. Agency requesting checklist: Washington Department of Natural Resources

6. Proposed timing or schedule (including phasing, if applicable):

   a. Auction Date: December 14,2004
   b. Planned contract end date (but may be extended): October 31, 2006
   c. Phasing:

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Timber Sale

   a. Site preparation: Piling and burning of landing debris.
   b. Regeneration Method: Hand planting of Douglas fir, western red cedar and western hemlock.
   c. Vegetation Management: Treatment needs will be assessed over time. Some slashing of hardwood and maple stump treatment is anticipated.
   d. Thinning: Possible pre-commercial thinning and/or commercial thinning.

   Roads: The 2+00 spur will be abandoned directly following the completion of haul activities. Road maintenance including grading, ditch clean out, and repair or replacement of culverts will occur as necessary on existing roads. The PT-C-900 and PT-C-910 roads will be used for future timber harvest and other management activities.

   Rock Pits and/or Sale: The rock for this sale will come from a commercial source.

   Other: Future forest management activities are anticipated to continue within the WAUs, and adjacent to the current proposal. Potential activities may include but are not limited to firewood salvage, hardwood slashing, maple stump treatment, pre-commercial thinning, commercial thinning and regeneration harvest. These future activities are connected with this proposal insofar as that they

will occur in close proximity to the sale area, and that the roads constructed or reconstructed under this proposal may be used to perform the required work. All future activities will be consistent with the State's Habitat Conservation Plan (HCP), and applicable policy and planning documents. At this time specific proposals have not been formulated, however some potential areas for future regeneration harvest have been identified as part of a broader scope planning process. These areas are located on parts of Section 33, Township 28 North, Range 01 West, W.M. Detailed harvest plans within this area will be dependent upon findings from on site reconnaissance and haul cost analysis.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☒*303 (d) – listed water body in WAU:* ☒ *temp* ☐*sediment* ☐*completed TMDL (total maximum daily load):*
☐*Landscape plan:*
☐*Watershed analysis:*
☐*Interdisciplinary team (ID Team) report:*
☒*Road design plan: Road Plan for Golden Goat, dated December 2, 2003*
☒*Wildlife report:Letter from Jeff Davis, Area WDFW Biologist, dated November 6, 2003*
☒*Geotechnical report: Geologic Report from Ana Pierson, dated July 16, 2004*
☒*Other specialist report(s): Hydrolic Reports(2) from DNR hydrologist Jim Ryan, dated January 13, 2004 and March 19, 2004*
☐*Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☐*Rock pit plan:*
☒*Other: Forest Resource Plan, dated July 1992; State Soil Survey; Habitat Conservation Plan (HCP), dated September 1997; G.I.S. Report for SEPA Evaluation on Dabob Watershed Administrative Unit; Special Concerns and TRAX Reports.*
All documents mentioned above may be obtained at the Olympic Region Office during the SEPA comment period.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
No.

10. List any government approvals or permits that will be needed for your proposal, if known.
☐*HPA* ☒*Burning permit* ☐*Shoreline permit* ☒*Incidental take permit* ☒*FPA*
☒*Other: Board of Natural Resources approval*

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. *Complete proposal description:*
The Golden Goat proposal consists of one unit totaling 100.2 acres and is located in Section 33, Township 28 North, Range 01 West, W.M. in Jefferson County. The majority of the proposal will be an even-aged clearcut, however a 50% partial cut treatment will occur east of the PT-C-900 road. Ground and cable methods will be used. The sale design has been shaped by an effort to protect natural resources, including structurally unique trees, potentially unstable slopes, streams, wetlands, and wildlife. The initial project planning effort identified 127.8 acres of land to examine for potential timber harvest. Sale reconnaissance identified 27.6 acres of the original proposal area to be managed for environmental protection rather than timber harvest. This represents a 21% reduction from the initial gross acreage. The following exclusions were made for this purpose: 4.6 acres of leave tree area, 21 acres of wetland and riparian protection and two acres of unstable slope protection (note that the majority of unstable slopes fall within the RMZ and WMZ. These two acres are outside of these areas).

Sale of Timber:

Estimated volume:	*2,385 MBF*
Proposal area in acres:	*127.8*
Sale area in acres:	*100.2*
Type of harvest:	*regeneration harvest (34 acres of 50% partial cut)*
Logging system:	*Ground based and Cable methods*
Landings: Number	*7*
Total area in acres	*.7 ac(based on a 100'X100' impacted area)*

Roads:

To be constructed (feet)	*2,431*
To be improved (feet)	*1,259 (reconstruction, does not include pre-haul maintenance)*
To be maintained(feet)	*14,256*

Other Related Actions: Any remaining landing debris will be piled and burned. The sale area will be reforested and vegetation management will be assessed on an on going basis.

b. *Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.*

This proposal contains stands that fall within the western hemlock vegetation zone (TSHE). The unit consists of a mix of Douglas fir, red alder, western red cedar, western hemlock, and big leaf maple ranging in age from 60-120 years old. Stand composition runs 57% conifer to 43% hardwood. The average diameter of the Douglas fir in the stand is 19 inches and the red alder average diameter is 13 inches, and tree heights run over 95 feet. Stand density (excluding understory initiation) is approximated at 135 trees per acre with a canopy closure of 80%. Stand defect is observed in the form of patches of phellinus root rot.

The understory ground vegetation is dense in places, and is composed primarily of evergreen huckleberry, salal, Oregon grape, and sword fern. The sale has been designed as a combination dispersed and group retention regeneration harvest. Ground and cable yarding methods will be used.

Areas identified for the purpose of resource protection include leave tree areas, RMZs, WMZs, and unstable slopes. Leave trees within the sale units have been selected based on wind firmness, size, and their unique structural characteristics. Most of the dispersed leave trees were selected from the dominant and co-dominant size classes. Larger trees often provide the height to diameter ratio, and rooting structure needed to withstand blowing over after the surrounding canopy is removed. Leave tree clumps were selected to protect forested wetlands, streams, and snags, and as such are representative of the stand in size and species. An effort was made to identify and leave all of the older residual trees in the sale area. Douglas fir and red cedar compose the majority of this material.

Activity objectives for this proposal are multifaceted. The timber sale will provide revenue to the trust beneficiaries while protecting ecological values. This includes: maintaining trees of unique structural characteristics such as old residual Douglas fir; protecting soil productivity and slope stability; protecting Type 3, 4 and 5 streams; protecting forested wetlands; managing wildlife habitat for Great Blue; and evaluating the use of a road system that will most efficiently serve management needs while minimizing long term road impacts. Existing roads in need of maintenance or reconstruction will be improved. Objectives also include reforesting the area to a well-stocked condition, and maintaining options for future land use activities.

c. *Road activity summary. See also forest practice application (FPA) for maps and more details.*

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		2,431	.67*	0
Reconstruction		1,259		0
Abandonment		200	.06	0
Bridge Install/Replace	0			0
Culvert Install/Replace (fish)	0			0
Culvert Install/Replace (no fish)	10			

*Based on a 12 ft running surface

Additional information:
Reconstruction work will vary by road, but will include the following activities: ditch construction (will require grubbing), pipe installations, ditch and headwall cleanout, application of surfacing, grading, and brushing. A seasonal restriction limiting roadwork and rock haul will be implemented during the period of November 1 to April 30. Processed rock is to be acquired from a commercial source

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. Legal description:
The Golden Goat proposal is located in Sections 33 Township 28 North, Range 01 West, W.M. in Jefferson County.

b. *Distance and direction from nearest town (include road names):*
From Chimacum go south seven miles to the Highway 104 intersection, turn east onto Highway 104, travel 1.5 miles to the Sandy Shore Lake road, turn south, on the south side of the road will be a gate, this road is Pope Resource's T-1400, travel 1.1 miles to the T-1500, travel .9 miles to the T-1600, travel .2 miles to the T-1640, travel .6 miles to the T-1642 for .1 miles. At this point the T-1642 becomes the C-900 you have entered the proposal.

c. *Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")*

This proposal falls within the Dabob WAU, the Quilcene-Dabob sub-basin and WRIA #17(Quilcene-Snow).

13. *Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)*

This proposal is located in the Quilcene-Dabob WRIA sub-basin of the Quilcene-Snow WRIA. The proposed unit is in the northern portion of the Dabob WAU. The Dabob WAU encompasses the Tarboo Valley, the eastern slopes of the Bolton Peninsula, and the western slopes of the Toandos Peninsula. All waters in these areas flow into Dabob Bay off of Hood Canal. DNR managed land represents 26% of the total land base within the WAU. The current stand conditions of State land within the WAU reflects 30% in the 0-24 year age class, and 70% in the 25+ year category. These age classes were selected to reflect upon what is considered to have reached hydrologic maturity. Completion of this proposal and other planned or sold sales in the WAU will shift these numbers to 37% and 63% respectively. This does not take into account the stands that will mature into the 25-year-old threshold during the expected two year contract term of this proposal. Future timber harvest activity in the surrounding landscape is anticipated to continue on State land. It is estimated that 714 acres of DNR managed lands were harvested within the Dabob WAU over the past eleven years. These sales are well distributed throughout the WAU. If all of the currently planned and sold sales are in fact harvested, an additional 268 acres will have been harvested by the year 2005. This equates to a harvest rate of 1.6% of State lands in the WAU per year.

The surrounding landscape is one of developing rural residential parcels, agricultural land, and commercial forestland. The closest home site in this area is located 200 ft from the north boundary of the sale. This approximately 36 acre private parcel has been partially harvested. The State's "North Urch" timber sale sits across from the eastern Type 3 drainage from this proposal. It is an 88 acre regeneration harvest that was logged in 2004. The two sales are separated by 700+ ft of RMZ and unstable slope protection. The private land to the west is mostly grazed agricultural land across the Tarboo valley. A private regen harvest of 38 acres is known to be proposed south of State ownership above the east fork of Tarboo creek. Local interest has been high regarding protection of the Tarboo creek drainages, given the stream restoration efforts that have taken place between WDFW, Jefferson County, the tribes, and local interest groups.

All current and future activities will be conducted according to the State's HCP, Forest Resource Plan, and State Forest Practices Rules, and are expected to mitigate for any potential adverse cumulative effects. Dispersed and clumped leave trees will provide structure for many wildlife species to use, and reduce the visual impacts of the harvest. The density of leave trees will average eight trees per acre for the area west of the C-900 and 50 percent of the volume will remain standing east of the C-900. Snags and down wood will also be provided. Assessments have been performed to evaluate the potential use of the proposal area by threatened and endangered species, and by species of concern. A potential timing restriction will be implemented on the southwest portion of the sale within 948 feet of the heron rookery if it becomes active. The residual Douglas fir tree that once housed an osprey nest will also be protected. The DNR's geologist and hydrologist have also examined the proposal area. The geologic assessment was performed to ensure that unstable slopes have been identified and are adequately protected. The selected silvicultural prescription within the old deep seated landslide areas, and within the recharge areas, will help to ensure that proposed management activities will not significantly increase subsurface flows. This will greatly reduce the risk of potential environmental impacts from harvest. Road network planning and road design have been performed in order to minimize the amount of road construction needed, and to ensure

the quality of existing and newly constructed roads. Timing restrictions on road reconstruction and construction will help to maintain the integrity of existing roads, and reduce the potential for off site movement of sediments. Ground yarding operations shall be suspended during periods of severe wet soil conditions when rutting of skid roads begins. Forest cover analysis was performed to ensure adherence to current policy on hydrologic maturity within WAU boundaries. G.I.S landscape reports were checked to evaluate the location of this proposal relative to environmentally sensitive areas.

The "adjacency" map has been reviewed and there are no changes to be noted. The "WAU" map does not show a 2005 planned sale named "Off Center" in the W1/2 of Section 16, Township 28 north, Range 1 west. Thirty six acres of this regeneration harvest are tributary to the west fork of Tarboo creek.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ☒Hilly, ☐Steep Slopes, ☐Mountainous, ☐Other:

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).

The Dabob WAU is located on the Olympic Peninsula. Its boundaries are defined by the upper most ridgelines on the Bolton Peninsula to the west, and the Toandos Peninsula (Coyle) to the east. All waters within this WAU flow into Tarboo and Dabob Bays. These waters stem off of Hood Canal, and are part of the Hood Canal Watershed. DNR ownership represents 26% of the land base in the WAU. The lowest elevations are at sea level along the bay. Moving inland the landform rises steeply along the shoreline bluffs, gaining finger ridges that make their way up to the main ridge top terraces at an elevation of 697 feet. Many of the streams coming off of the peninsulas are deeply incised where they make their way down through the main topographic break to reach the tidelands. The upper elevations are quite flat to rolling across the broadened ridge top of the main body of the peninsulas. The WAU averages 40 inches of rain per year, and the major timber types present are Douglas fir and red alder.

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).

The sale area is located closer to the main ridge top at the higher elevation in the WAU. Steep incised drainages and potentially unstable slopes have been excluded from the proposal.

b. What is the steepest slope on the site (approximate percent slope)?

The steepest slope on the proposal is 40 percent on 20 percent of the proposal area.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture	% Slope	Acres	Mass Wasting Potential	Erosion Potential
6404	Silt loam	15-30	40	Insignificant	Low
7641	Gravelly sandy loam	0-15	34	Insignificant	Low
7642	Gravelly sandy loam	15-30	25	Insignificant	Low
0956	Sandy loam	15-30	1	Low	low

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) Surface indications:

The stream along the east side of the proposal shows signs of both shallow rapid and deep-seated landslides. The three deep-seated landslides do not show signs of recent movement, although some of the larger diameter trees do appear to be kinked and/or leaning. The active area on the deep-seated landslides appears to be at the toe of the slides in the form of shallow rapid landsides.

2) Is there evidence of natural slope failures in the sub-basin(s)?
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*

Natural slope events occur within incised draws where streams undercut the toe of the slope, causing some slides to begin. Slope failures also occur on very steep slopes underlain by unstable soils during periods of extreme saturation. Deep-seated landslide features are known to exist along some of the steep bluff lines on the Toandos peninsula, and along the main topographic break into the East Fork of Tarboo Creek.

3) Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
Associated management activity:

There is evidence of shallow and deep-seated landslide activity along both sides of the tributary to East Fork Tarboo Creek, this stream is on the east boundary of the proposal. The association between the harvest activity and the slope failures are unknown given the nature of deep rotational failures, and the fact that they are also occurring in mature timber stands where harvest has not recently taken place.

4) *Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?* ☐*No* ☒*Yes, describe similarities between the conditions and activities on these sites:*

Yes, the proposal actually includes portions of three deep-seated landslides. The DNR's geologist was consulted and her recommendations where followed. The prescription for the recharge area contributing water to the deep-seated landslides as well as the features themselves will have only 50% of the volume removed in an effort to reduce the increase in sub-surface flows.

5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*

The prescription for the area contributing water to the deep-seated landslides as well as the features themselves will have only 50% of the volume removed in an effort to reduce the increase in sub-surface flows. Active areas of shallow rapid failures have been excluded from the sale area. During road and landing construction and usage adequate measures will be taken to collect and distribute surface runoff so as to minimize erosion and sediment delivery and to divert surface runoff away from the steep slopes. At no time will spoils generated during road/landing construction and logging activity be disposed of on or near the tops of steep slopes or down onto steep slopes.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill. *Approx. acreage new roads: .67s Approx. acreage new landings: .7 Fill source: On-site native material and privately owned commercial rock sources.*

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

A small amount of surface erosion incidental to freshly exposed soils is anticipated.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

1.7% of the sale area will be in permanent road running surface as defined by compacted pit run ballast or crushed surfacing. This is based on a 12 ft running surface on newly constructed roads, and a 50 ft X 50'rocked landing area.

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any: *(Include protection measures for minimizing compaction or rutting.)*

Roads will be constructed with properly located ditches, ditchouts and cross drains to divert water onto stable forest floor and/or into stable natural drainages. Road reconstruction, construction and rock haul will be restricted from November 1 to April 30, when the potential for erosion and sediment movement is at its peak. Use of harvesting equipment will be limited, with no rubber tired skidders allowed, and no ground yarding to occur from November 1 to February 28. Operations shall be suspended during periods of wet weather or wet soil conditions when rutting of skid roads begins.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling,* automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Insignificant amounts of engine exhaust from logging equipment and dust from passage of log trucks. Logging slash, if burned, will be burned adhering to the State's smoke management plan.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map and forest practice base maps.)*

Along the west side of the unit a Type 3 stream runs north-south, this stream is a tributary to Tarboo Creek. Adjacent to the stream is a 3.2 acre forested wetland. Along the east side of the unit is a Type 3 stream that runs north-south, this stream is also a tributary to Tarboo Creek. Also along the east boundary is a forested wetland measuring .4 acres. Along the north west portion of the boundary there is a Type 4 stream that is on private property. In the eastern half of the unit there are four forested wetlands all less than ¼ acre in size. Within three of these sensitive areas leave trees were placed for protection. The 4th falls within the 100 foot buffer of the .4 acre wetland so it is protected by the buffer.
These streams and wetlands are tributary to Tarboo Creek.

a) Downstream water bodies:

All waters are tributary to Dabob Bay and Hood Canal.

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Forested wetlands <.25 acre in size	N/A	4	Leave tree s remain around the perimeter
Forested wetlands >1.0 ac	N/A	1	150
Forested wetlands <1 acre in size	N/A	1	100
stream	5/Ns	1	Buffered by WMZ
stream	4/Np	1	100 (mostly on pvt land)
stream	3/F	2	150

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.

The Type 3 streams are buffered by 150 feet. The Type 4 stream is buffered by 100 feet where it comes just within 100 feet of the property line near the north boundary. Most of stream buffer would fall on private land. The Type 5 stream contained within the WMZ of the greater than one acre wetland. The greater than one acre forested wetland is buffered by 150 feet. The less than .25 acre wetlands have leave trees remaining around the perimeter. No wind buffers where applied.

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map.)*
Description (include culverts):

Harvest operations will occur within 200 ft of the wetlands and streams. Activity within the forested wetland greater than one acre WMZ will be limited to the hand falling of five take trees in a manner that will allow them to be reached from outside of the WMZ. No other removals are to occur within the other WMZ, and no trees will be harvested within the RMZs. Clumping leave trees around their perimeter has protected all of the small 0.1-acre forested wetlands. Contract language will require that no equipment may operate within the protective leave tree areas around the forested wetlands, or within the RMZs or WMZs. The contract will also prohibit timber to be felled into, across, or yarded through these areas, with the exception of the marked take tree removals from the greater than one acre forested wetland buffer.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*

☒*No* ☐*Yes, description: Note that the Type 4 stream along the north boundary of the sale has been previously diverted onto State land by the adjacent private landowner. The WDFW has examined this situation and requested that the stream be placed back in it's original channel. The State has contacted the landowner and requested that he remove the existing piping which relocates the outfall of the springs on his land.*

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒*No* ☐*Yes, describe location:*

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒*No* ☐*Yes, type and volume:*

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

It is possible that surface erosion is occurring in areas as described in Part B.1.d.1 & 2. The G.I.S. Reports for SEPA Evaluation on the Dabob WAU indicates that only 1% of the WAU has high soil erosion potential. Soils reports also indicate that the erosion potential for the immediate area is listed as low. Based on the sale design, off site movement of sediment should be minimal.

8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☐*No* ☒*Yes, describe changes and possible causes:*

There are some channels in the Dabob WAU that show evidence of accelerated aggradation due to a combination of factors including surface erosion, slides and increased peak flows. These changes are attributed to both natural events and human activity. The Type 3 stream on the east boundary of the stream has been influenced by repeated mass wasting events on both large and small scale. Deep-seated earthflows on the opposite side of the stream have forced the stream westward. The stream continues to erode at the toe, oversteepening slopes, and resulting in small failures into the stream.(See Geologic Report, July 16,2004)

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☐*No* ☒*Yes, explain:*

With recommendations from the geologist and hydrologist a different prescription was applied to the slope effecting the Type 3 stream on the east side of the boundary. This prescription was choosen to minimize subsurface flow, the increase will be only 1-2 percent.

On the remainder of the proposal a small increase in surface runoff is anticipated. Runoff is expected to return to prehavest conditions relative to this proposal within 25 years. Given the topography, soil types and protective measures being taken, this proposal should have little affect on stream and water quality.

10) What are the approximate road miles per square mile in the WAU and sub-basin(s)?

The G.I.S. database shows that the Dabob WAU averages 4.1 road miles per square mile.

Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒*No* ☐*Yes, describe:*

11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, ***STOP HERE*** *and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*
☒*No* ☐*Yes, approximate percent of WAU in significant ROS zone.*
Approximate percent of sub-basin(s):

12) If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?

13) Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?
☐*No* ☒*Yes, describe observations:*

There have been increases in peak flows associated with small drainage basins that contain a high percentage of young (less than 25 years old) timber which have created channel scouring. See answer to B.3.a.8. above.

14) Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.

As recommended by the Geologist and Hydrologist, a different prescription was applied to the area contributing to slopes above the eastern Type 3 stream. Fifty percent of the volume will be left in this area. This will result in only a 1-2 percent increase in subsurface flow (see groundwater assessment dated 3/19/04)
In the remaining area of the proposal a significant increase is not anticipated. The buffering effects of riparian and wetland management zones and leave trees will also have a positive effect. All current and future activities will be conducted according to the State's HCP, and are expected to mitigate for any potential adverse cumulative effects.

15) Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?
☐*No* ☒*Yes, possible impacts:*

Within Section 33, Township 28 North, Range 1 West, W.M., there are three surface water rights registered, one reservoir and one ground water right registered with the Department of Ecology that are potentially located downstream of this proposal. There is not enough information provided in the Special Concerns report to determine their exact locations. Commercial oyster culture also occurs at the head of Tarboo Bay, which is fed by the Tarboo creek drainage. Areas of potential slope instability that may be associated with incised stream channels have been described in part B.1.d.1&4. above, and have been excluded from the proposal. Based on the factors described in parts B.3.a.9. and B.3.a.14, negative impacts resulting from increased flows is not anticipated.

16) Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.

A special prescription was applied to the slope contributing to three deep-seated landslides. The prescription will leave 50 percent of the volume standing and this will likely increase subsurface flow by 1-2 percent over the course of an average year. The spatial forest cover analysis was examined to ensure adherence to current policy on hydrologic maturity within WAU boundaries. G.I.S landscape reports were checked to evaluate the location of this proposal relative to the rain-on-snow zone-mapping units. Prompt reforestation will initiate a move towards the recovery of hydrologic maturity.

b. Ground *Water*:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None.

3) Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?
☐*No* ☒*Yes, describe:*

A small increase in groundwater volume is anticipated during peak storm events.

a) Note protection measures, if any.

See B.3.a.15 & 16 above.

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Storm water will be collected by ditches, ditchouts and cross drains and diverted to stable forest floor material.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Does not apply.

a) Note protection measures, if any.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)

Also see B.1.h. and B.3.c.1 above. Yarding equipment restrictions and timing restrictions for roadwork will reduce the potential for off site movement of sediment during the period of late fall through early spring when surface runoff is at its peak. The sale design, including harvest system design and road construction considerations, should maintain natural flow patterns.

4. Plants

a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☐*cottonwood,* ☐*western larch,* ☐*birch,* ☐other:
☒evergreen tree: ☒*Douglas fir,* ☒*grand fir,* ☐*Pacific silver fir,* ☐*ponderosa pine,* ☐*lodgepole pine,* ☒*western hemlock,* ☐*mountain hemlock,* ☐*Englemann spruce,* ☐*Sitka spruce,* ☒*red cedar,* ☐*yellow cedar,* ☐other:
☒shrubs: ☒*huckleberry,* ☒*salmonberry,* ☒*salal,* ☐*other: oceanspray, Oregon grape, swordfern*
☐grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☒skunk cabbage, ☒*devil's club,* ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐*plant communities of concern:*

b. What kind and amount of vegetation will be removed or altered? *(See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*

This proposal involves harvesting 100.2 acres of 60-80 year old mixed species heavy to Douglas fir, with varying amounts of western hemlock, red cedar, red alder and bigleaf maple. The species composition will not be significantly changed in the WAU, as the area will be reforested with similar species. A minimum of eight trees per acre will be left scattered and clumped to provide structure for wildlife use. Leave trees include at least two trees per acre of the largest trees on site. Defective trees that have been identified as valuable for wildlife have also been left. Approximately 2,385 thousand board feet of timber will be removed. Most of the conifer and deciduous trees will be harvested, with the exception of those left distributed throughout the sale area for wildlife purposes. Shrub and herbaceous plants will be disturbed during logging, however most species will recover and respond favorably to the increase in available sunlight. There will be a transition from more shade tolerant species to intolerant species.

1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")

To the north is private timberland and two private parcels, the timberland is a Douglas fir plantation approximately 15 years old and the parcels have houses and are partially harvested. To the west is Tarboo valley. This valley has traditionally been a cow pasture but is currently in various stages of stream restoration. To the south is a private parcel and state-owned timberland. The private parcel was harvested approximately 20 years ago and was replanted with conifer. The state timberland is 60-80 year old conifer. To the west is a Type 3 stream RMZ with areas of unstable slopes. Trees found within the riparian and wetland protective zones differ slightly from the surrounding stand conditions. These areas contain a somewhat higher percentage of hardwood species. Red alder and bigleaf maple are more abundant, and the conifer exhibits more red cedar and western hemlock. Site productivity is a bit higher on the slopes leading into the stream drainages. Trees in these areas exhibit slightly larger diameters, increased tree heights

2) Retention tree plan:

The proposal can be divided into two separate areas, the dividing line being the existing road(C-900) in the east half the proposal. East of the C-900, 50 percent of the volume was marked to leave for unstable slope reasons. The 50 percent marked trees are painted in blue. The majority of these trees were selected from the dominant and codominant crown classes in order to maintain hydrologic function on the site. Also in the area east of the C-900 are two leave tree areas that are protecting less than 1/4 acre wetlands. Trees in these areas are more representative of the stand. On the west side of the C-900 the retention trees are both scattered and left in leave tree areas to provide a wide variety of upland habitat diversity. Trees in the leave tree areas are representative of the stand. There are 12 leave tree areas (450 trees) on the west side of the C-900. Also 71 individually scattered trees have also been designated. Individually marked leave trees were selected to represent the dominant size and crown class, or to capture unique structure. An effort was made to identify and select all of the older, residual trees. Snags that can be safely left standing will remain. A down log component will also be provided by requiring all trees down for five years or more be left undisturbed. These legacy trees and reserve trees will help to provide future multi-layered canopies and general habitat diversity. They will also help to reduce the visual impacts from regeneration harvests.

c. List threatened or endangered *plant* species known to be on or near the site.

None.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Dispersed individual trees and scattered clumps of trees will be left at a minimum density of eight trees per acre after harvest.

5. Animal

a. Circle or check any birds animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ☐hawk, ☒heron, ☐eagle, ☒songbirds, ☐*pigeon,* ☐other: raven, crow
mammals: ☒deer, ☒bear, ☐elk, ☐beaver, ☐other: short-tailed weasel
fish: ☐bass, ☒salmon, ☒trout, ☐herring, ☐shellfish, ☐other: sculpin
unique habitats: ☐*talus slopes,* ☐*caves,* ☐*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*

b. List any threatened or endangered species known to be on or near the site *(include federal- and state-listed species).*

Chinook Salmon (Puget Sound Run) and Chum Salmon (Hood Canal Summer Run).

The proposed harvest area was evaluated for its suitability as potential Marbled Murrelet habitat using the DNR's computer modeling technique. The model is approved by the U.S. Fish and Wildlife Service, and is consistent with the State's HCP management strategy for marbled murrelets. Results indicate that the proposal does not meet the threshold to be considered habitat. The sale is not located within any Spotted Owl Circles. Pileated woodpecker use is evident throughout the sale area. An attempt will be made to leave snags on site to provide potential nesting and feeding opportunities.

c. Is the site part of a migration route? If so, explain.
☒*Pacific flyway* ☐*Other migration route:* *Explain if any boxes checked:*

Washington is considered part of the Pacific flyway, no migratory birds where seen during the time on the proposal.

d. Proposed measures to preserve or enhance wildlife, if any:

Dispersed and clumped leave trees will provide some structure for many wildlife species to use. The minimum density of leave trees will average eight trees per acre for the sale. Snags and down wood will also be provided. The new open cover type created by the harvest will enhance foraging opportunities for some wildlife species. Riparian management zones, wetland management zones, and adjoining unstable slope protection will provide ample buffering along fish bearing streams. Riparian obligate species should benefit from these large leave areas. The HCP riparian strategy will provide old forest conditions across the landscape over time.

1) Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.

Species /Habitat: Osprey	Protection Measures: The actual nest tree has not been active since 1986 when the top of the nest tree was lost. In 2004 a WDFW representative visited and verified that the tree was not active. The tree will be left along with 51 other trees in the immediate area.
Species /Habitat: Great Blue Heron	Protection Measures: The rookery is 600 feet south of the southeast portion of the sale. The rookery consists of eight Douglas fir trees with an average diameter of 22 inches. There was no evidence of use in 2003 or 2004. There is a 948 foot timing restriction buffer applied to the rookery, this effects the sale area that is south and east of the 12+59 road(C-900). The restriction will be applied from February 15th to July 31st, only if the rookery is active during the sale contract. A DNR wildlife biologist will confirm the use of the rookery each spring. *****Note: When the WDFW biologist GPSed the nest site it shows up incorrectly, it should be 600 feet south and east of its mapped position.**

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Does not apply.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

Does not apply.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Does not apply.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

The operating of heavy machinery will pose a minimal level of hazard. Harvest operations will increase the risk of fire for a period of time. Contract language and State burning rules will require operations to be performed in a manner that will reduce the risk of fire. Fire suppression tools and equipment will be made readily available on site.

1) Describe special emergency services that might be required.

Does not apply.

2) Proposed measures to reduce or control environmental health hazards, if any:

Hazard abatement will be required along the north boundary of the sale in proximity to structures. Contract language will require that preventative measures be taken to avoid on site disposal, or spilling of hazardous materials. The reporting and cleanup of any spills of petroleum based products or other waste will also be required.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Does not apply.

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

Noise will be created from chainsaws; heavy equipment and log truck traffic during daylight hours while the sale is active.

3) Proposed measures to reduce or control noise impacts, if any:

None at this time.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)*

The current use of the site is timber production. The northwest boundary is residential with two home sites. The west boundary is agricultural pasture. The remaining edges are timberland.

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structures on the site.

Along the northwest boundary a private landowner has trespassed onto State property. In this area the adjacent landowner has built a 20’ X 27’ shed and two water reservoirs.

d. Will any structures be demolished? If so, what?

The shed structure and water reservoirs will be removed or destroyed.

e. What is the current zoning classification of the site?

Commercial forest.

f. What is the current comprehensive plan designation of the site?

Commercial forest.

g. If applicable, what is the current shoreline master program designation of the site?

N/A

h. Has any part of the site been classified as an “environmentally sensitive” area? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

None.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

N/A

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Proposed activities are compatible with land use designations.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

N/A

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

N/A

c. Proposed measures to reduce or control housing impacts, if any:

N/A

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?

Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?

1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☐*No* ☒*Yes, viewing location:*

The west half of the proposal will be visible from a county road, the Dabob-Coyle Road. There are several residences that will have a view of the proposal.

2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☐*No* ☒*Yes, scenic corridor name:*

The proposal is visible from the Dabob-Coyle Road.

3) How will this proposal affect any views described in 1) or 2) above?

The views from the residences and the county road will be altered by removing mature timber until regeneration can be established.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Within the harvest area an effort had been made to distribute leave tree areas and individual trees to lessen the visual impacts where possible. This has been done by using a visual simulation model to help design and assess the aesthetic impacts of the harvest.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Some areas now shaded by timber will be exposed to sunlight.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

Does not apply.

d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

There are informal opportunities for hiking, bird watching, and hunting. Logging roads are also used for mountain bike riding and horseback riding.

b. Would the proposed project displace any existing recreational uses? If so, describe:

Displacement of these uses is not anticipated.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

No measures will be taken since impacts are thought to be minimal.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

A check of DNR's TRAX system indicates there are no known places or objects.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

N/A

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

N/A

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Sandy Shore Road, State Highway 104 and U.S. Highway 101.

1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?

No. The transportation system was designed to accommodate commercial timber extraction and is consistent with past levels of use.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No.

c. How many parking spaces would the completed project have? How many would the project eliminate?

N/A

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

This proposal involves 2,431 feet of new logging road, 1,259 feet of reconstruction and 2.7 miles of existing road maintenance. Work to be performed will include roadside brushing, ditch work, application of surfacing, grading, culvert placement and excavation.

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?

The roads for this proposal have been planned as part of a larger transportation network to serve future management needs in the area. Such planning will provide for efficient use of the road system and eliminate unnecessary road construction.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Does not apply.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

A minor number of trips will be generated in association with normal land management activities.

g. Proposed measures to reduce or control transportation impacts, if any:

The existing forest road system leading to the proposal is gated just off of Sandy Shore Road.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Does not apply.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

None.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

None.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: Cindi Tonasket Forester 1 Date: July 20, 2004
Title